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April 29, 2005

Ms. Kimberly Tisa
EPA New England, Region 1
1 Congress Street
Suite 1100 (CPT)
Boston, MA 02114-2023

Re: McCoy Field Site
225 Hathaway Boulevard
New Bedford, MA 02740

Dear Ms. Tisa:

This letter addresses review comments presented in a Memorandum to you dated April 5, 2005 from Yoon-Jean Choi, P.E. The review comments are related to the *Risk-Based Cleanup Request, Rev. 0, March 21, 2005*, for the School Site at the above-referenced location, submitted by BETA Group, Inc. on behalf of the City of New Bedford. The purpose of this letter is to respond to Mr. Choi's comments, with focus on the adequacy of the technical design for the engineered cap proposed for the Site.

EPA General Comment #1 – Related to discussion of fate and transport to support cap design.

Section 4.1.2 (Environmental Fate and Transport Characteristics) has been expanded to discuss the characteristics of all contaminants of concern, with emphasis on PCBs. We further discuss how the proposed cap and institutional controls for the Site are protective of the human health and the environment.

In addition, we have expanded Attachments E (Long-Term Cap Monitoring Program) and F (Environmental Monitoring Plan) to present a summary of fate and transport issues and how they were considered in designing the plan.

EPA General Comment #2(1) – Related to environmental control plan, storm water management plan, erosion control plan.

The environmental control, storm water management, erosion control, and dust control plans are addressed in the following documents:

- Storm Water Pollution Prevent Plan, submitted to EPA in September 2004;
- Soil Management and Dust Monitoring Section of the Work Plan (page 24);
- Attachment O of the Work Plan (Waste and Regulated Soil Removal Plan); and
- Phase III Contract Drawing EX.1.

We have revised Section 4.1.2 of the Risk Based Cleanup Request (Environmental Fate and Transport Characteristics) to reference the above documents. The Storm Water Pollution Prevention Plan is included as Attachment H. Phase III Contract Drawing EX.1 is included as Figure 8.

The entire site (not including the building footprint) has been provided with the geotextile separation layer. The limits of the fabric include the entire length of Hathaway Boulevard to the east, Nemasket

Street to the south, the back lot lines of the Durfee Street properties to the north, and the toe of the embankment to the west. At the northern and southern ends of the embankment area depicted on Contract #2 Drawing # L2, the fabric extends southerly to Nemasket Street and northerly to the back lot lines of Parcels 75 5, 75 6, and 75 7 on Durfee Street. Hay bales and silt fences are in place, as required in the Order of Conditions received from the Conservation Commission and shown in Figure 5 (detail 1/L6), along the toe of the entire embankment, Hathaway Boulevard, and other resource areas (see EX.1).

EPA General Comment #2(2) – Related to distinction between geotextile fabrics and warning barrier.

Four geotextile fabrics are specified for the Site:

- The separation fabric used outside the building footprint to separate regulated soil to remain on Site from clean soil is Mirafi 600X (Phase II Spec. 02200 – Earthwork, as amended by Addendum No. 2, dated 8-13-04);
- The coated separation fabric to protect construction workers from exposure is Mirafi MCF1212 (Phase II Spec. 02200);
- The geotextile to be placed for adherence of the spray-on gas vapor barrier is Mirafi 1100N. (Phase III Spec. 07133); and
- Non-woven protection course geotextile, LBI Technologies Ultrashield G-1000, is specified for use over the gas vapor barrier (Phase III Spec. 07133). Also see Phase III Spec. 07133 for details on the gas vapor barrier.

Reference is made to Shop Drawing (LW1100 Dig Barrier) for details on the warning barrier. The warning barrier is or will be placed in all landscaped areas.

Note: We have expanded Attachment B to include the specifications and shop drawings for the separation fabric, coated separation fabric, adherence geotextile, warning barrier, and gas vapor barrier.

EPA General Comment #2(3) – Related to information on topsoil layer.

We have included Specification 02900 - Lawns in Attachment G.

EPA General Comment #3 – Related to terminology of "Engineer" vs. "Architect".

The Contract Documents use the term "Architect" generically to refer to the "Architect, its subcontractors, and other designated consultants of the City". As indicated in Phase II Contract Documents Section 02280-1.01A (attached), BETA Group is responsible for directing "excavation, removal, segregation, handling, temporary stockpiling, loading, transportation, and offsite management of the fill layer and unsuitable subgrade soils". BETA has been present at the Site throughout construction to observe, direct and document the aforementioned activities.

EPA Specific Comment #1 – Related to intrusion into fill material underneath the exposure management barriers.

With respect to intrusion from animals, we believe the warning barrier and thick geotextile fabric will prevent or strongly discourage burrowing; therefore, we do not believe additional provisions are necessary at this time. The Activity and Use Limitation to be filed for the property requires that the City routinely monitor and repair damage to the asphalt and/or soil cap, including that resulting from animal burrowing.

With respect to root intrusion, care has been taken to select only those species of trees and shrubs that have shallow root systems. While we expect that root intrusion below the separation fabric will occur to some degree, we do not expect significant disruption or movement in the cap itself. The AUL has the following provisions to address this issue:

- Removal of subgrade root systems is limited to 1 foot below grade;
- A list of acceptable shallow rooted trees and shrubs;
- A list of prohibited deep, tap root species of trees;
- Periodic site inspections are required to identify and remove any indigenous deep-rooted species (i.e. maple, oak and similar deciduous trees) that are identified within the AUL area.

Section 1.4 (page 5) and Attachment A (Draft Notice of Activity and Use Limitation) have been revised to address potential intrusion of roots into fill material located below the exposure management barrier.

EPA Specific Comment #2 – Related to pavement installation details.

Inconsistencies between pavement installation requirements included in Section 3.3.4 and illustrated on Figure 5 have been corrected. Figure 5 (Section 3/L6) was revised to eliminate the warning barrier and label the material beneath the separation geotextile as "existing regulated soils".

EPA Specific Comment #3 – Related to geotextile specifications in Attachment B.

The Mirafi 1100N geotextile fabric is specified for use below the vapor barrier as an adherence surface; the non-woven protection course geotextile is specified for use above the vapor barrier.

EPA Specific Comment #4 - Attachment E (Long-term Cap Monitoring Plan)

(1) - Related to minimum asphalt thickness listed in Attachment E.

The minimum thickness of the asphalt pavement will be 3 inches, as indicated in the Phase III Contract Documents. Attachment E erroneously specified a minimum thickness of 6 inches. Attachment E has been revised to indicate a minimum thickness of 3 inches for the asphalt pavement.

(2) – Related to infiltration of water into engineered caps.

The engineered barriers are not intended to prevent or minimize infiltration of water. This language was originally included in Attachment E, but it has since been deleted.

EPA Specific Comment #5 - Attachment G (Specification for Backfill Materials)

(1) - Related to terminology of "Engineer" vs. "Architect".

The Contract Documents use the term "Architect" generically to refer to the "Architect, its subcontractors, and other designated consultants of the City". As indicated in the Phase II Contract Documents, Section 02280-1.01A (attached), BETA Group, Inc. is responsible for directing "excavation, removal, segregation, handling, temporary stockpiling, loading, transportation, and offsite management of the fill layer and unsuitable subgrade soils". BETA personnel have been present at the Site to observe, direct and document the aforementioned activities.

(2) - Related to Section 3.04.A.2, Samples and Testing.

Reference is made to Phase II Contract Specification 02200, a copy of which has been included in Attachment G. The specification addresses the testing requirements before the material is delivered to the site and after it is installed.

(3) – Related to Section 3.04.B.1. Lift thickness.

The specified lift thickness is "loose".

EPA Specific Comment #6 - Figure 4 (Gas Vapor Barrier & Venting Plan Details)

(1) – Related to Typical 1: Location of pressure relief collection and venting system PRCVS.

The purpose of the PRCVS is to vent any gas trapped in the subsurface due to the gas vapor barrier. It will be located just below the vapor barrier and above the compacted fill layer to eliminate trapping of any soil gas that may accumulate. Please note that the results of the soil gas survey, as discussed in Section 2.2.3, indicate that soil gas is not expected to pose a significant risk to human health, and the installation of the venting system was recommended as an added precautionary measure.

Section 3.3.1 (Building Footprint) has been expanded to explain why the Pressure Relief Collecting and Venting System (PRCVS) is located above the compacted fill.

(2) – Related to Typical 3: Purpose of "Gas & Vapor membrane 80 Dry mil".

The purpose of the "Gas & Vapor membrane 80 Dry mil" is to effect a vapor tight seal between the grade beam and the adherence geotextile. The membrane will be applied above the grade beams using a spray-on technology, prior to pouring of the concrete slab.

Section 3.3.1 (Building Footprint) has been expanded to explain the purpose of the "Gas & Vapor Membrane 80 Dry Mil" shown in Figure 4. We also described how the membrane is to be installed above the grade beam.

(3) – Related to Typicals 4 & 5: PVC vent and PVC header pipe connection.

Figure 9 has been included to illustrate connection of the PVC vent and header pipes.

We trust that our responses adequately address the questions and concerns raised during EPA's review of the cap design details; however, we will be available to address any further questions or concerns that may arise. Please call either Jackie Huggins or me with any questions related to the contents of this letter or any further concerns that may arise.

Very truly yours,

BETA GROUP, INC.

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